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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
10/632,190	07/30/2003	Muthu Senthil	ORCL-2003-032-01	3952								
<div>7590 12/11/2007 WAGNER, MURABITO & HAO LLP Third Floor Two North Market Street San Jose, CA 95113</div>			<div>EXAMINER PANNALA, SATHYANARAYA R</div> <table border="1"><thead><tr><th>ART UNIT</th><th>PAPER NUMBER</th></tr></thead><tbody><tr><td>2164</td><td></td></tr></tbody></table> <div><table border="1"><thead><tr><th>MAIL DATE</th><th>DELIVERY MODE</th></tr></thead><tbody><tr><td>12/11/2007</td><td>PAPER</td></tr></tbody></table></div>		ART UNIT	PAPER NUMBER	2164		MAIL DATE	DELIVERY MODE	12/11/2007	PAPER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/632,190

Applicant(s)

SENTHIL, MUTHU

Examiner

Sathyanarayan Pannala

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

Response to Amendment

2. Applicant's Amendment received on 10/31/2007, in response to the Office Action mailed on 10/18/2007. This amendment has been entered. In this Office Action, claims 1-20 are pending.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-20 are rejected under 35 U.S.C. § 101, because none of the claims are directed to statutory subject matter. Independent claims 1, 6 and 14 deals with simple abstract ideas. A claim that recites a computer that solely calculates a mathematical formula or a computer disk that solely stores a mathematical formula is not directed to the type of subject matter eligible for patent protection. See Diehr, 450 US at 186 and Gottschalk v. Benson, 409 U.S. 63, 71-72(1972).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilpatrick et al. (US Patent 6,742,124) hereinafter Kilpatrick, and in view of Chan et al. (US Patent 6,697,844) hereinafter Chan.

7. As per independent claim 1, Kilpatrick teaches an intrusion detection operating efficiently in real-time. Computational efficiency is generated through the representation of known sequences of system calls in a distance matrix. The distance matrix indirectly specifies known sequences by specifying allowable separation distances between parts

of systems (col. 3, lines 11-16). Kilpatrick teaches the claimed, calculating a Levenshtein matrix of said first string and said second string (Fig. 6, col. 10, lines 7-10). Kilpatrick teaches the claimed, determining a Levenshtein distance from said Levenshtein matrix (Fig. 6, col. 10, lines 27-28). Kilpatrick teaches the claimed, determining if first string is a match to second string based upon said similarity (col. 11, lines 8-10).

Kilpatrick does not explicitly teach largest common substring between strings. However, Chan teaches the claimed, determining a largest common substring (Fig. 4, col. 9, lines 2-6). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Chan's teachings would have allowed Kilpatrick's method to reduce the amount of latency by caching and prefetching components of electronic mail messages using information relating to similar objects that were previously supplied to the client by the mail server (col. 2, lines 22-25 and lines 33-35). Chan teaches the claimed, determining a similarity between said first string and said second string as a function of said Levenshtein distance and said largest common substring (Fig. 4-5, 7A-B, col. 9, lines 2-6 and col. 10, lines 55-62).

8. As per dependent claim 2, Kilpatrick teaches the claimed, determining a largest common substring from said Levenshtein distance matrix comprises determining a longest diagonal of equal hamming distances of a lowest value.(Fig. 5, Table 2, col. 9, lines 31-45).

9. As per dependent claim 3 Kilpatrick teaches the claimed, calculating a Levenshtein score (Fig. 5, col. 9, lines 44-45).
10. As per dependent claim 4, further comprising determining the length of the largest common substring (Fig. 5, Table 2, col. 9, lines 31-35).
11. As per dependent claim 5, further comprising calculating a largest common substring score (Fig. 5, Table 2, col. 9, lines 31-35).
12. Claims 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilpatrick et al. (US Patent 6,742,124) hereinafter Kilpatrick, in view of Haigh et al. (USPA Pub. 2003/0004716 A1) hereinafter Haigh, and in view of Chan et al (US Patent 6,697,844) hereinafter Chan.
13. As per independent claim 6, Kilpatrick teaches an intrusion detection operating efficiently in real-time. Computational efficiency is generated through the representation of known sequences of system calls in a distance matrix. The distance matrix indirectly specifies known sequences by specifying allowable separation distances between parts of systems (col. 3, lines 11-16). Kilpatrick teaches the claimed, calculating a Levenshtein matrix of a first string and a second string (Fig. 6, col. 10, lines 7-10). Kilpatrick teaches the claimed, determining a Levenshtein distance from said Levenshtein matrix (Fig. 6, col. 10, lines 27-28). Kilpatrick teaches the claimed,

determining if first string is a match to second string based upon said similarity (col. 11, lines 8-10).

Kilpatrick does not explicitly teach largest common substring between strings. However, Haigh teaches the claimed, determining a largest common substring (Fig. 6, page 5, paragraph [0053-0054]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]). Kilpatrick teaches the claimed, calculating a Levenshtein score as a function of said Levenshtein distance (Fig. 6, col. 9, lines 44-45). Kilpatrick teaches the claimed, calculating a largest common substring score as a function of said largest common substring (Fig. 6, Table 2, col. 9, lines 31-35).

Kilpatrick and Haigh do not explicitly teach determining similarity between two strings. However, Chan teaches the claimed, determining a similarity between a set of characters in said first string and a set of characters in said second string as a function of said Levenshtein distance and said largest common substring (Fig. 4-5, 7A-B, col. 9, lines 2-6 and col. 10, lines 55-62). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Chan's teachings would have allowed Kilpatrick's method to reduce the amount of latency by caching and prefetching

components of electronic mail messages using information relating to similar objects that were previously supplied to the client by the mail server (col. 2, lines 22-25 and lines 33-35).

14. As per dependent claim 7, Kilpatrick teaches the claimed, calculating an acronym score of said first string and said second string (Fig. 6, col. 9, lines 44-45).

15. As per dependent claim 8, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, calculating a weighted acronym score comprising a product of said acronym score and an acronym weight factor (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

16. As per dependent claim 9, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, calculating a weighted Levenshtein score comprising a product of said Levenshtein score and a Levenshtein weight factor calculating a weighted largest common substring score comprising a product of said largest common substring score and a largest common substring weight factor and calculating a Levenshtein largest common substring score comprising a sum of said weighted Levenshtein score and said

weighted largest common substring score (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

17. As per dependent claim 10, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, a sum of said Levenshtein weight factor and said largest common substring weight factor is equal to one (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

18. As per dependent claim 11, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, calculating a first weighted numerical score, comprising a product of said Levenstein/largest common substring score and a string weight factor (Fig..7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed

Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

19. As per dependent claim 12, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, calculating an acronym score, calculating a weighted acronym score comprising a product of said acronym score and an acronym weight factor and calculating a second weighted numerical score comprising a sum of said first weighted numerical score and said weighted acronym score of said first string and said second string (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

20. As per dependent claim 13, Kilpatrick and Haigh combined teaches claim 6. Haigh teaches the claimed, a sum of said string weight factor and said acronym weight factor is equal to one (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in

order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

21. As per independent claim 14, Kilpatrick teaches an intrusion detection operating efficiently in real-time. Computational efficiency is generated through the representation of known sequences of system calls in a distance matrix. The distance matrix indirectly specifies known sequences by specifying allowable separation distances between parts of systems (col. 3, lines 11-16). Kilpatrick teaches the claimed, calculating a Levenshtein matrix of a first string and a second string (Fig. 6, col. 10, lines 7-10). Kilpatrick teaches the claimed, determining a Levenshtein distance from said Levenshtein matrix (Fig. 6, col. 10, lines 27-28). Kilpatrick teaches the claimed, determining if first string is a match to second string based upon said similarity (col. 11, lines 8-10).

Kilpatrick does not explicitly teach does not teach first numerical score as function strings. However, Haigh teaches the claimed, calculating a first numerical score as a function of said Levenshtein score and said largest common substring score (Fig. 6, page 5, paragraph [0053-0054]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to • overcome difficulties, time consuming and tedious while using rules or regular

expressions (page 1, paragraph [0011]). Kilpatrick does not explicitly teach largest common substring between strings. However, Chan teaches the claimed, calculating a largest common substring score as a function of Said largest common substring (Fig. 4, col. 9, lines 2-6).

Kilpatrick and Haigh do not explicitly teach largest common substring between strings. However, Chan teaches the claimed, numerical score is a first quantification of a similarity between a set of characters in said first string and a set of characters in said second string as a function of said Levenshtein distance and said largest common substring (Fig. 4-5, 7A-B, col. 9, lines 2-6 and col. 10, lines 55-62). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Chan's teachings would have allowed Kilpatrick's method to reduce the amount of latency by caching and prefetching components of electronic mail messages using information relating to similar objects that were previously supplied to the client by the mail server (col. 2, lines 22-25 and lines 33-35).

22. As per dependent claim 15, Kilpatrick teaches the claimed, calculating a subtracting the resultant of dividing said Levenshtein distance by an average of a length of said first string and a length of said second string from one (Fig. 6, col. 9, lines 44-45, col. 10, lines 27-28).

23. As per dependent claim 16, Kilpatrick, Haigh and Chan combined teaches claim 14. Haigh teaches the claimed, determining a length of said largest common substring from said Levenshtein matrix and dividing said length of said largest common substring by an average of a length of said first string and a length of said second string (Fig. 7, page 5, paragraph [0053-0054 and 0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

24. As per dependent claim 17, Kilpatrick, Haigh and Chan combined teaches claim 14. Haigh teaches the claimed, calculating a weighted Levenshtein score comprising a product of said Levenshtein score and a Levenshtein weight factor, calculating a weighted largest common substring score comprising a product of said largest common substring score and a largest common substring weight factor and summing said weighted Levenshtein score and said weighted largest common substring score (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to

overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

25. As per dependent claim 18, Kilpatrick teaches the claimed, calculating an acronym score and calculating a second numerical score as a function of said first numerical score and said acronym score (Fig. 6, col. 9, lines 44-45). Kilpatrick teaches the claimed, determining if first string is a match to second string based upon said similarity (col. 11, lines 8-10).

26. As per dependent claim 19, Kilpatrick, Haigh and Chan combined teaches claim 14. Haigh teaches the claimed, calculating a weighted Levenshtein score comprising a product of said Levenshtein score and a Levenshtein weight factor, calculating a weighted largest common substring score comprising a product of said largest common substring score and a largest common substring weight factor, calculating a Levenshtein largest common substring score comprising a sum of said weighted Levenshtein score and said weighted largest common substring score, calculating a weighted Levenshtein/largest common substring score comprising a product of said Levenshtein/largest common substring score and a Levenshtein/largest common substring weight factor, calculating a weighted acronym score comprising a product of said acronym score and an acronym score weight factor and summing said weighted Levenshtein largest common substring score and said weighted acronym score (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of

ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

27. As per dependent claim 20, Kilpatrick, Haigh and Chan combined teaches claim 14. Haigh teaches the claimed, utilizing said first numerical score for determining said similarity, when said first string and said second string comprise numerical-type strings and utilizing said second numerical score for determining said similarity, when said first string or said second string comprise character-type strings (Fig. 7, page 5, paragraph [0057]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Haigh's teachings would have allowed Kilpatrick's method to identify and categorize text within documents in order to overcome difficulties, time consuming and tedious while using rules or regular expressions (page 1, paragraph [0011]).

Response to Arguments

28. Applicant's arguments filed on 10/31/2007 have been fully considered but they are not persuasive and details as follows:

a) Applicant's argument stated as "In the present Office Action dated October 18, 2007, the Examiner indicates in his Response to Arguments that he only considered Applicant's response filed July 26, 2007 containing only the Amendments to the Claims and note the Remarks and Arguments contained in Applicant's response filed July 6, 2007."

In response to Applicant argument, Examiner disagrees, because applicant should know that a typical amendment consists of an introduction briefing claims, listing of claims and remarks section. Applicant submitted all the sections (see page 1-9 of the amendment filed on 7/30/2007 and none of the pages were missing to send another non-compliant office action) and always, it is the Applicant's responsibility to include arguments in the remarks section.

b) Applicant's argument regarding "Claims 1, 6, 14 and 18 rejection under 35 U.S.C. 112, 2nd paragraph as being indefinite."

In response to Applicant's argument, examiner has withdrawn this rejection.

c) Applicant's argument regarding claims 1-20 rejection under 35 U.S.C. 101 stated as "Furthermore, Claims 1, 6 and 14 as amended recite the useful, concrete and tangible process of 'determining if said first string is a match to said second string based upon said similarity' or 'numerical score.'"

In response to Applicant's argument, respectfully examiner disagrees, because, Applicant did not amend the claims and they are mere mathematical abstract idea and they are under nonstatutory subject matter.

d) Applicant's argument regarding claim 1 rejection under 35 U.S.C. 103 stated as "the combination of Kilpatrick and Chan clearly teach away from the limitations of 'calculating a Levenshtein matrix of a first string and a second string,' 'determining a Levenshtein distance from said Levenshtein matrix,' and 'determining a largest common substring from said Levenshtein matrix' as recited in Claim 1."

In response to Applicant's argument, respectfully examiner disagrees, because, calculating a Levenshtein matrix of two strings is well known in the art. The prior art by Kilpatrick teaches the same (Fig. 6, col. 10, lines 7-10). The second prior art by Chan teaches how to determine the largest common substring (Fig. 4, col. 9, lines 2-6). Therefore, the combination of two references teaches all limitation of claim 1.

Conclusion

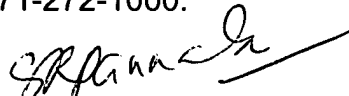
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Sathyanarayan Pannala
Primary Examiner

srp
December 10, 2007